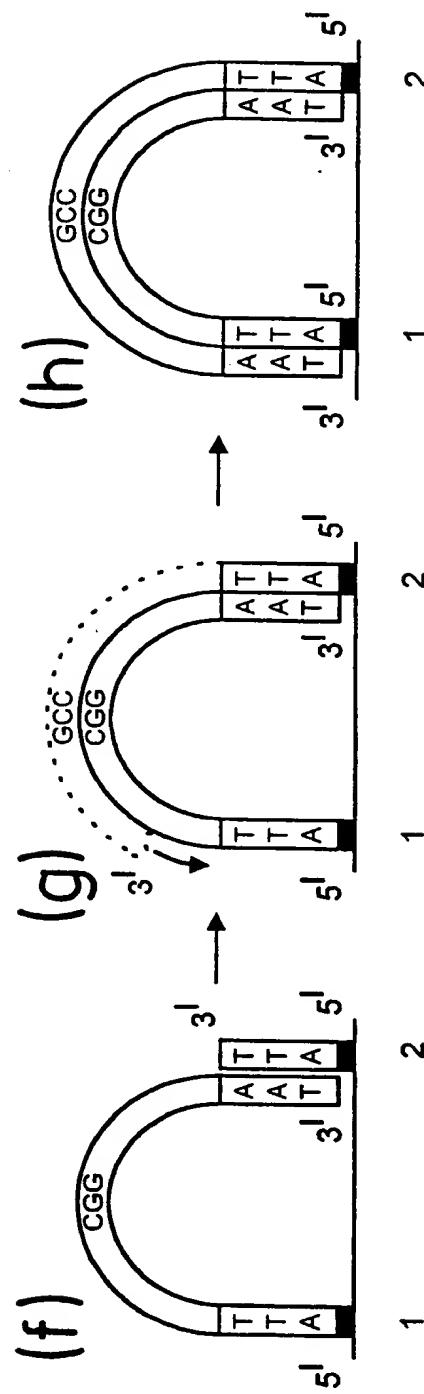
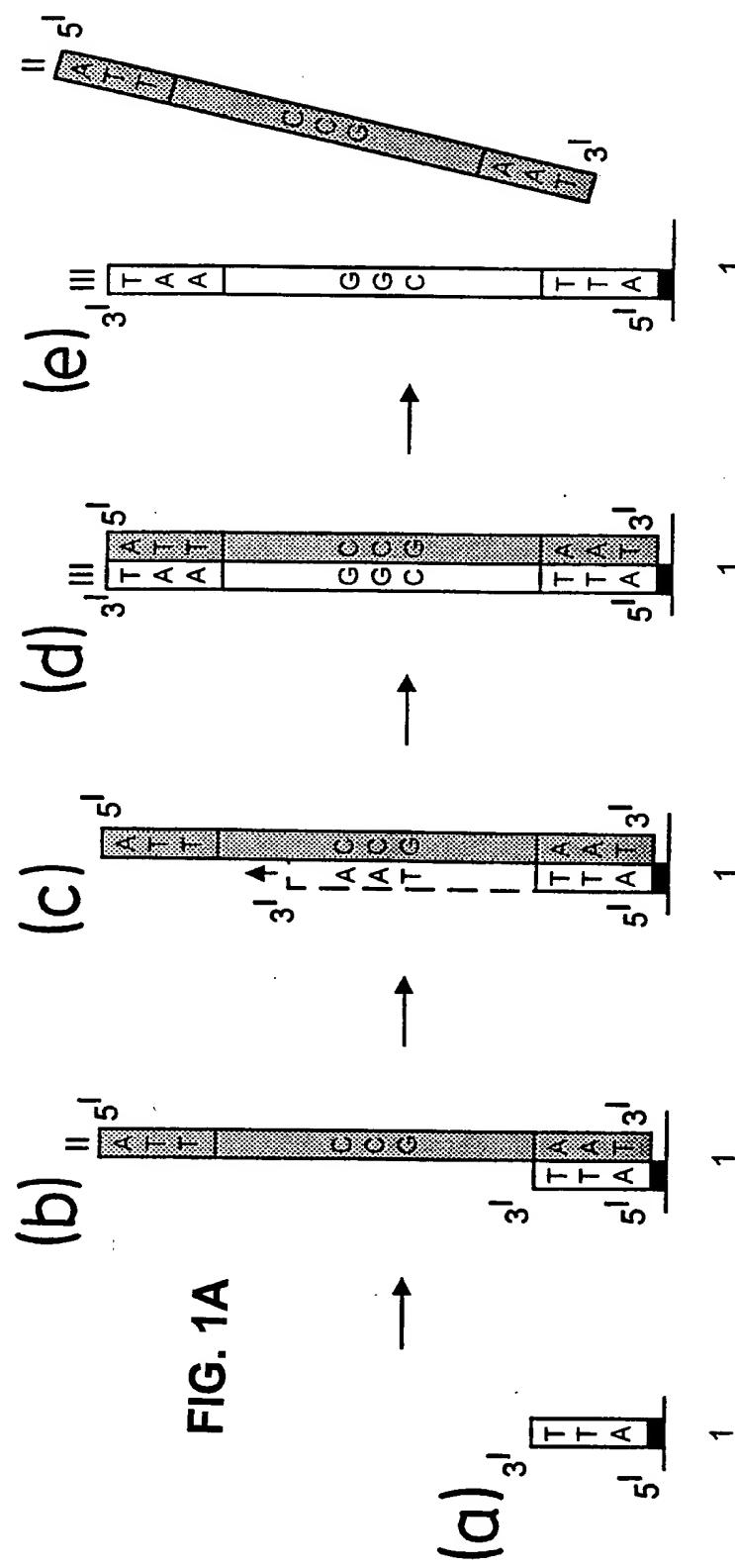
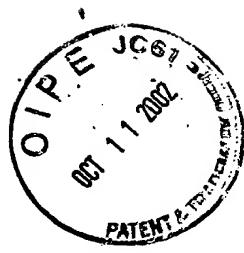


1/27





2 / 27

3

G
G
C

T
T
A

4

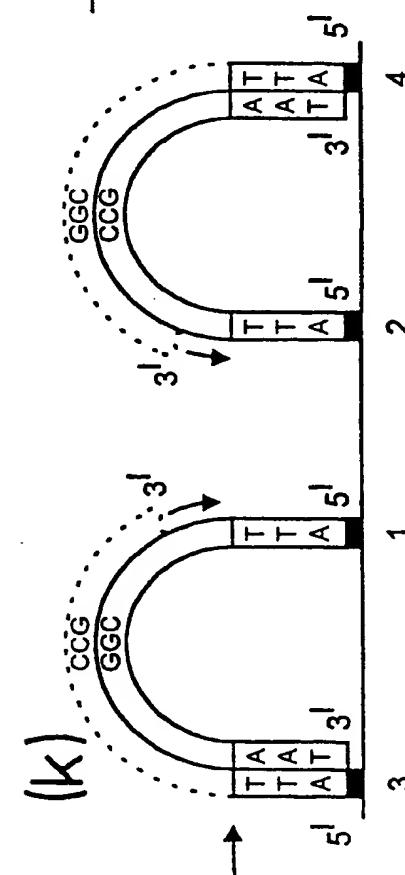
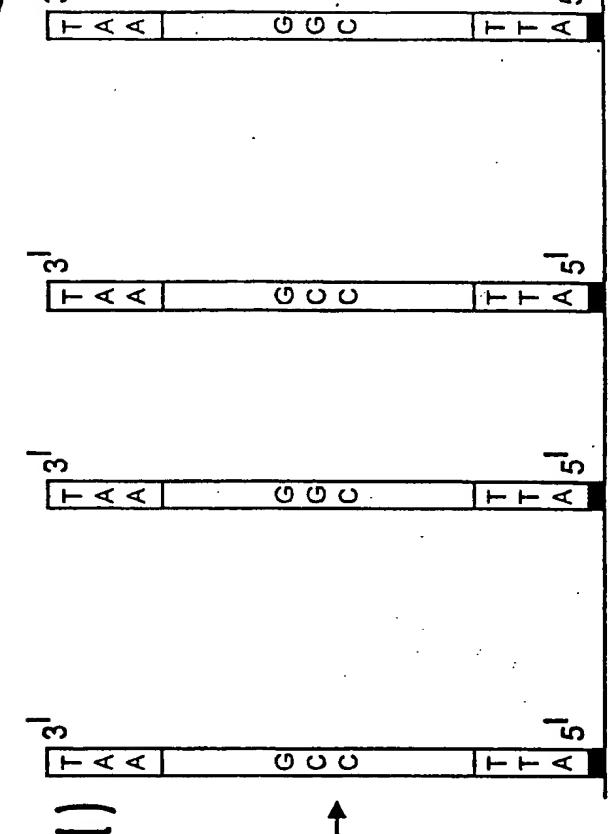
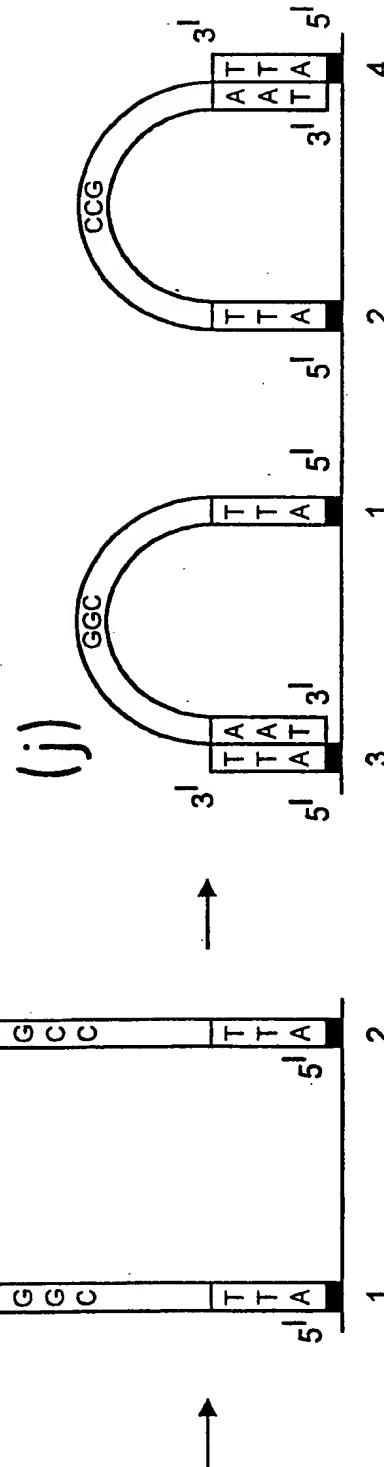
FIG. 1B

(i)

3' T A A | G C C | T T A | 5' 3'

→

SUBSTITUTE SHEET (RULE 26)



3 / 27

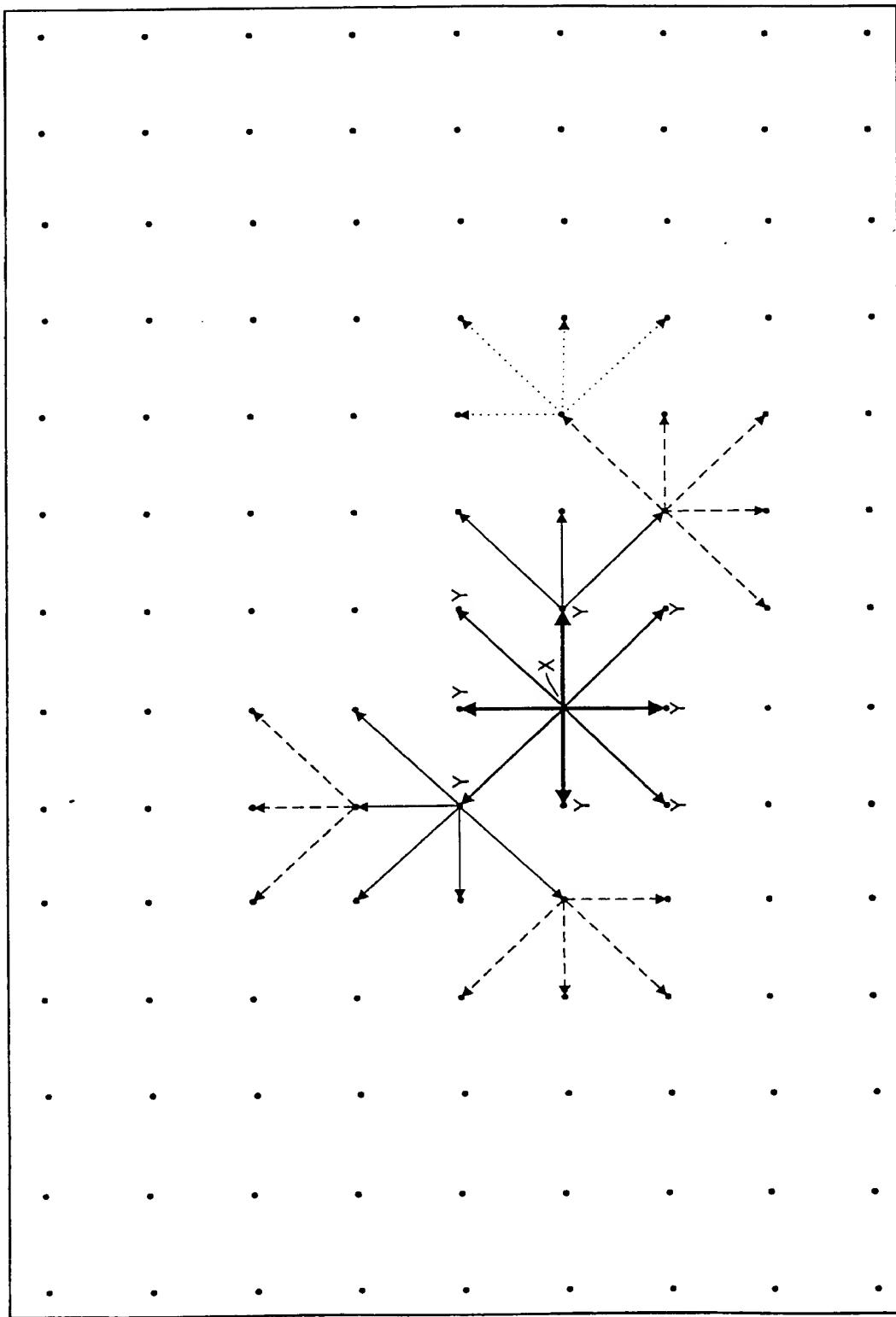
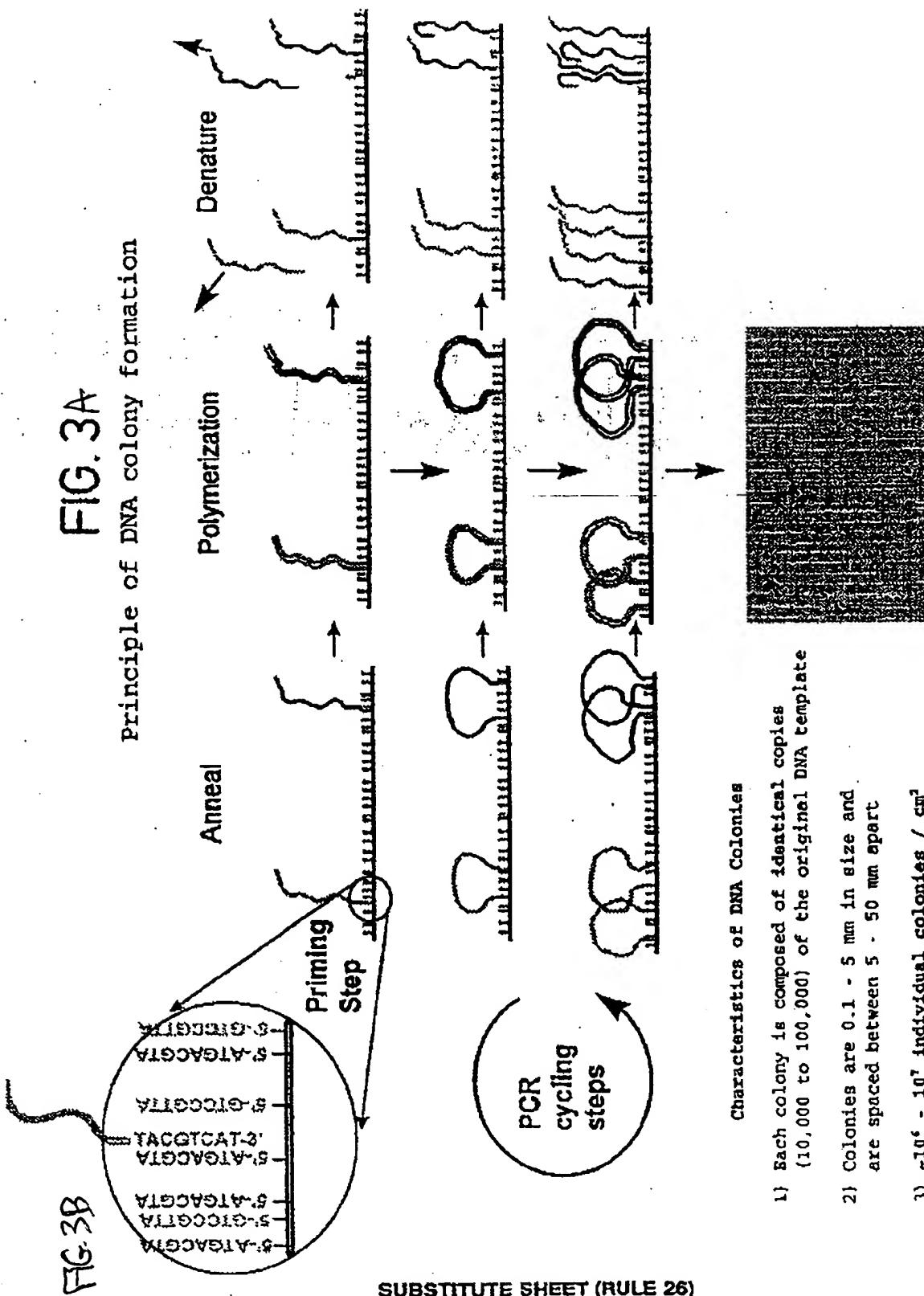


FIG. 2 SHOWS SCHEMATIC VIEW OF COLONY GROWTH

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4/27



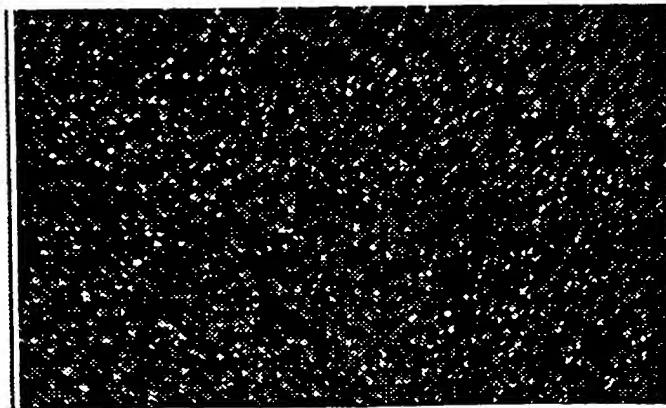
5 / 27

FIG. 4

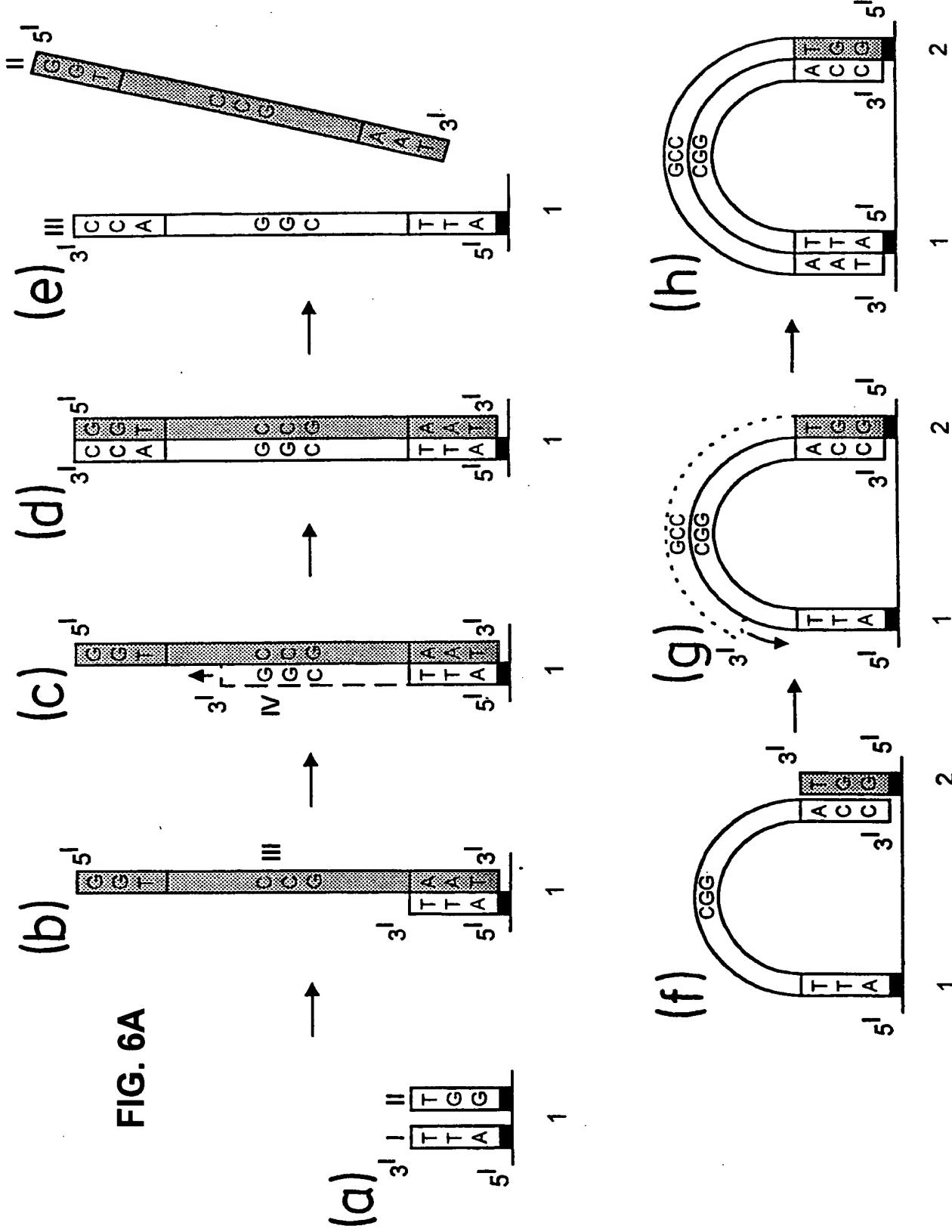
Colony generation on tubes functionalised with oligonucleotide p57 (control). Results of visualisation of fluorescent microspheres. Hybridisation with probe detects 0.10 fmol/tube.

**FIG. 5**

Colony generation on tubes functionalised with oligonucleotide p58. Results of visualisation of fluorescent microspheres. Hybridisation with probe detects 6.2 fmol/tube



6 / 27

**FIG. 6A**



7/27

3' C C A G G C T T A 5'

4

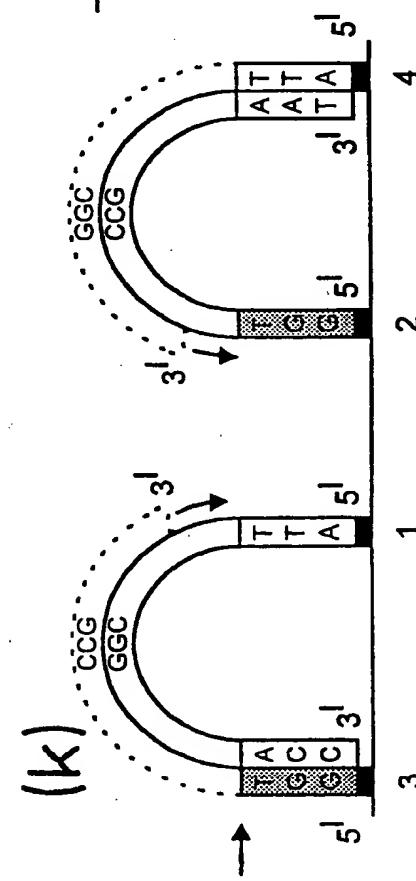
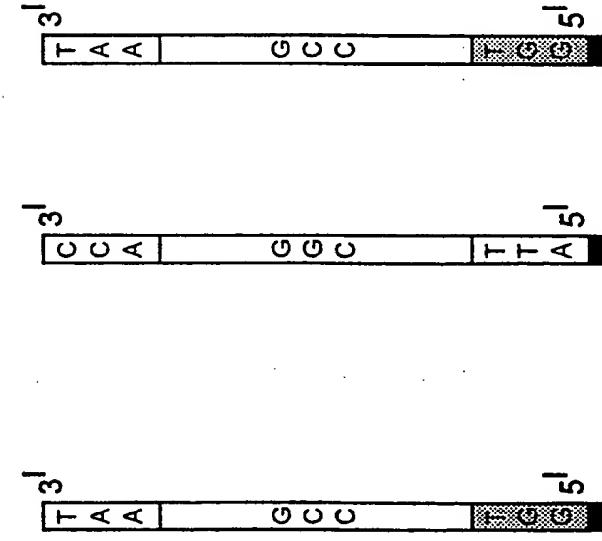
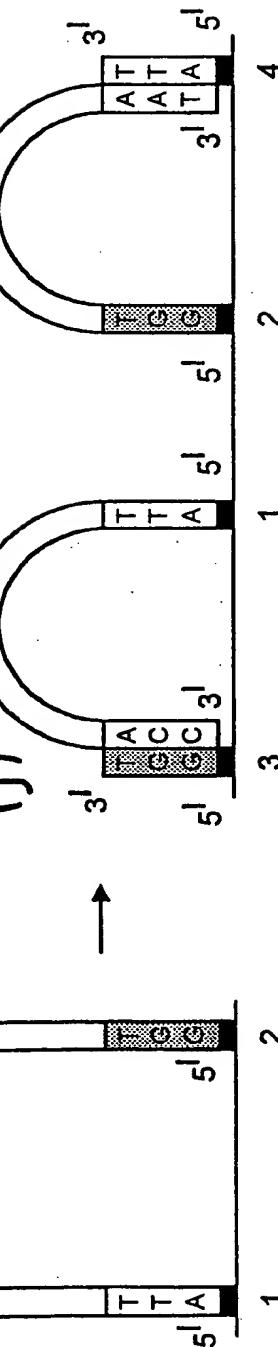
FIG. 6B

(i)

3' T A A G C C G C C T T A 5'

→

1 2 3 4



8/27

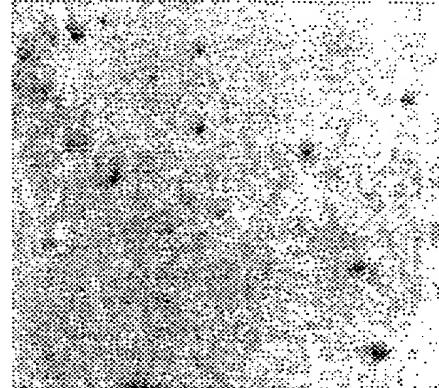
FIG. 7

DNA amplification - detection of colonies with DNA intercalating dyes

i) control

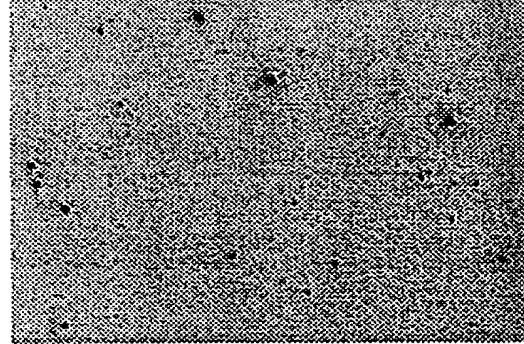


ii) with template

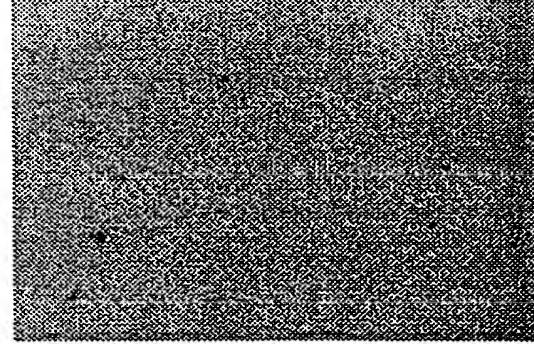
**FIG. 8**

DNA amplification; detection of colonies by specific probe hybridisation

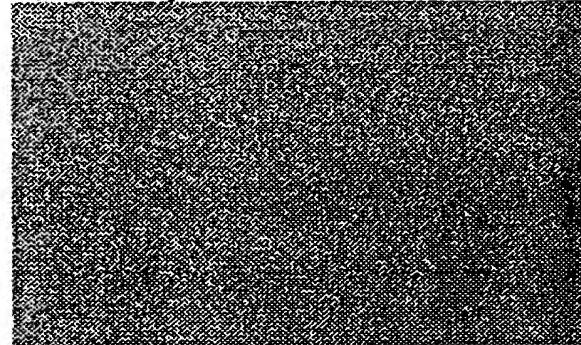
i) S1/S2 template ratio = 1/0



ii) S1/S2 template ration = 1/10



iii) S1/S2 template ratio = 0/1



9 / 27

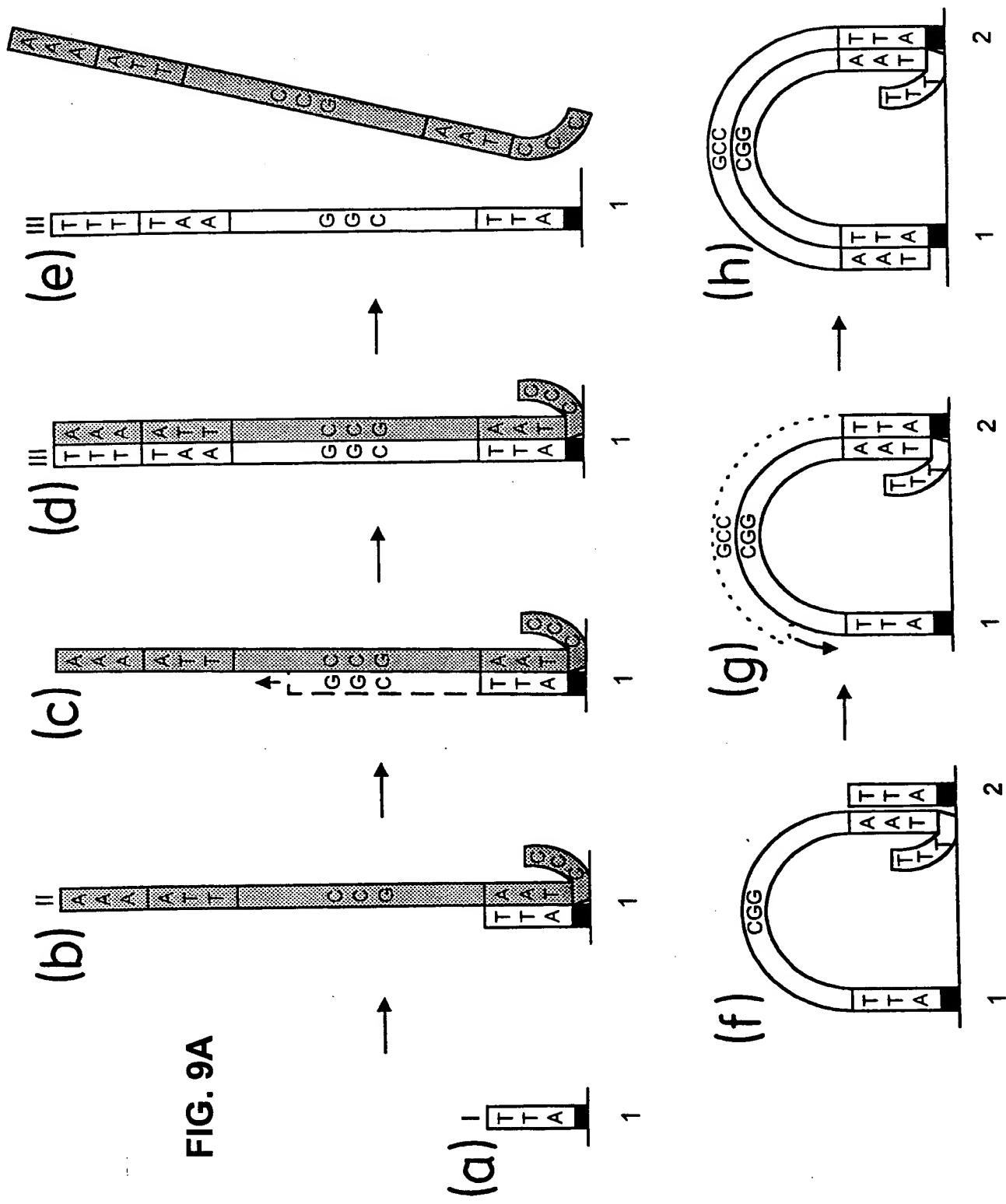
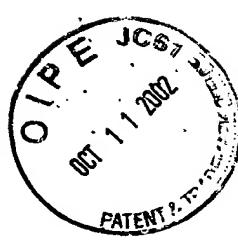
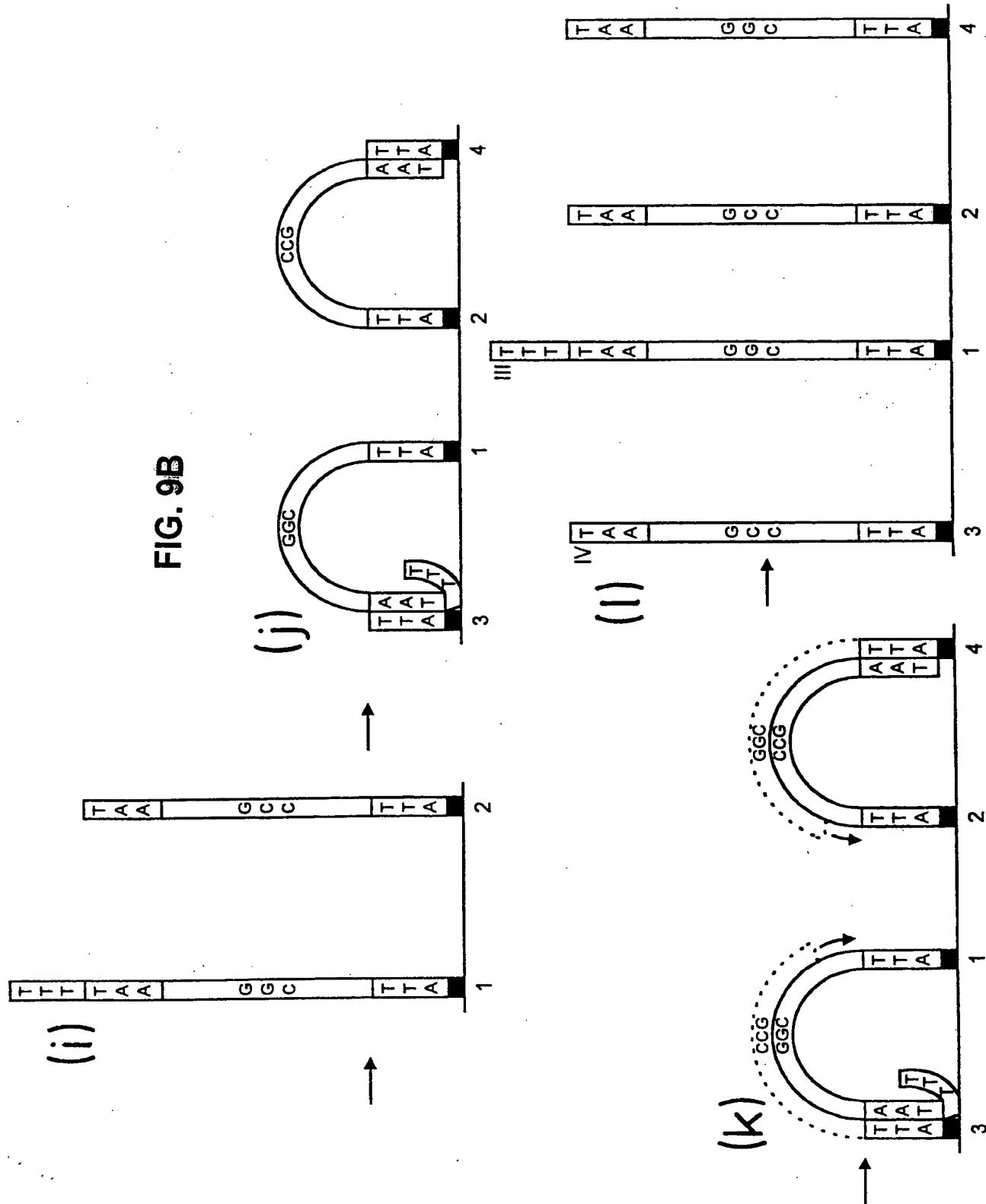


FIG. 9A



10 / 27

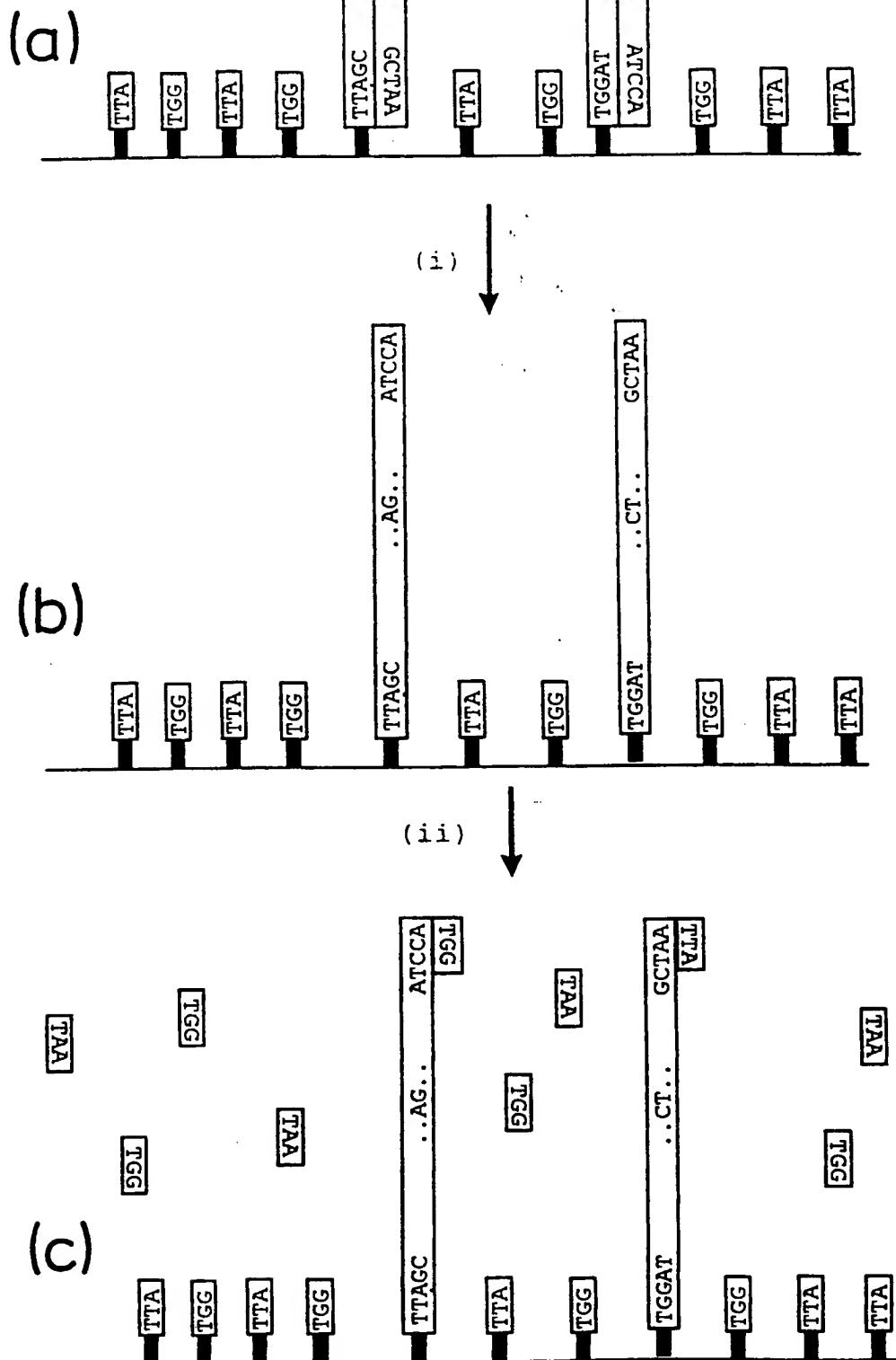
FIG. 9B



SUBSTITUTE SHEET (RULE 26)

11 / 27

FIG. 10A



12 / 27

(iii)

FIG. 10B

(iv)

TGGAT	..CT..	TGGAT	AATGC
ATCCA	..AG..	ATCCA	TTAGC
AATGC	..AG..	ATCCA	TTAGC

(e)

TAA

TGG

TAA

TGG

TAA

TAA

TGG

TAA

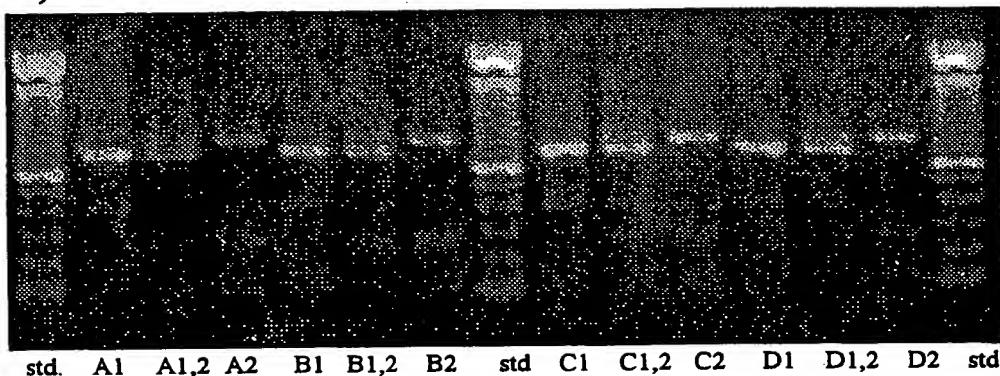
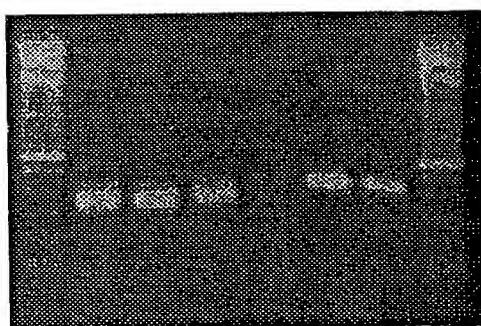
TGA

TAA

TAA

SUBSTITUTE SHEET (RULE 26)

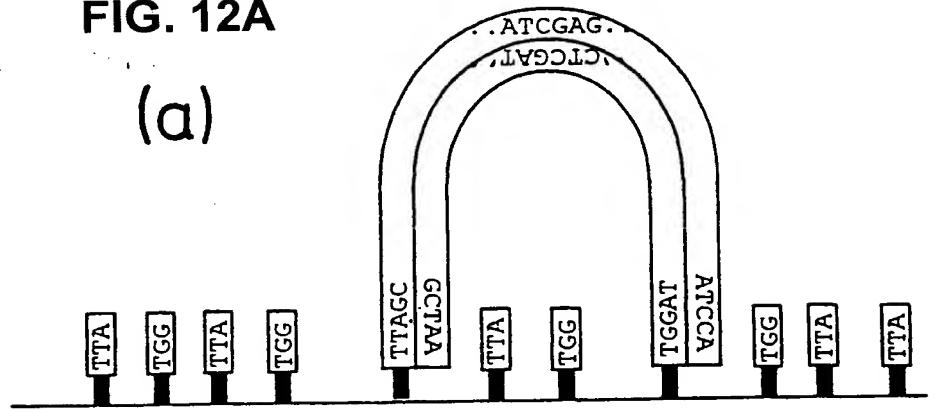
13 / 27

FIG. 11.**A)****B)**

14 / 27

FIG. 12A

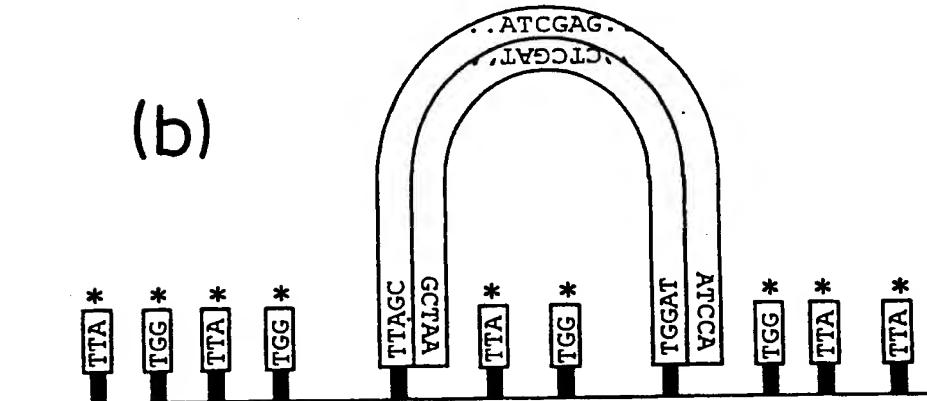
(a)

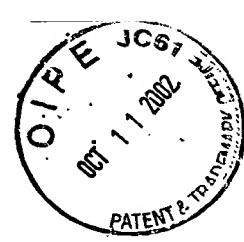


(i)



(b)

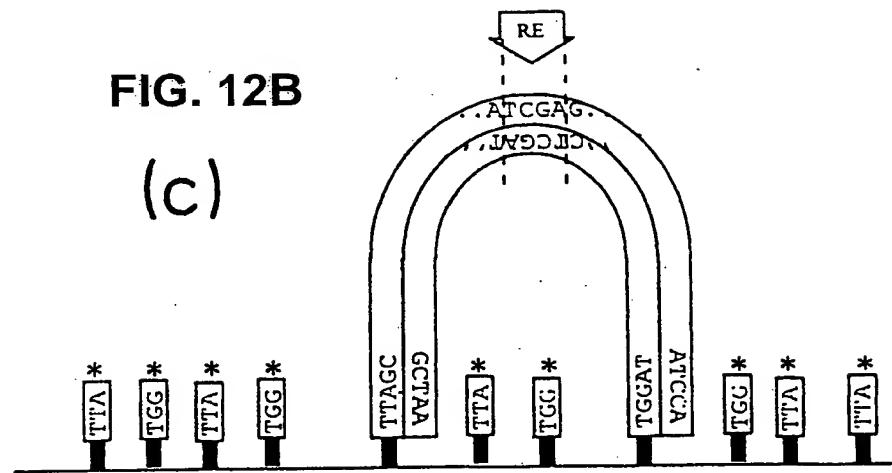




15 / 27

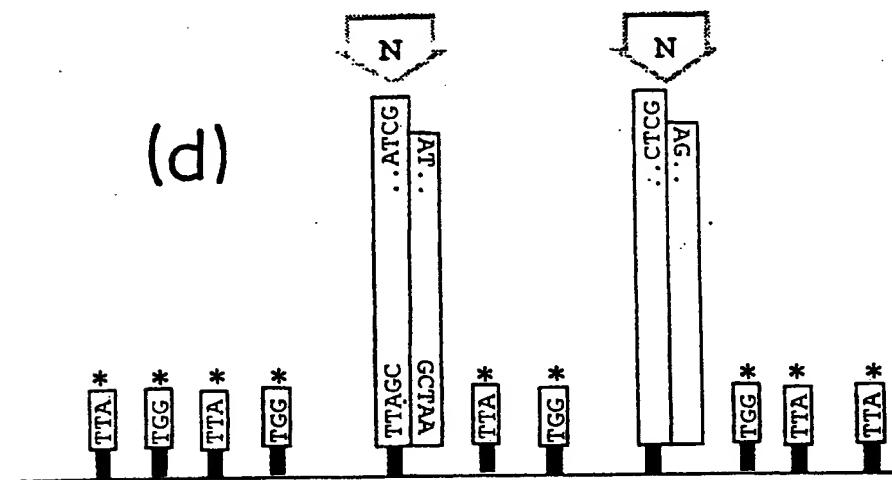
FIG. 12B

(C)



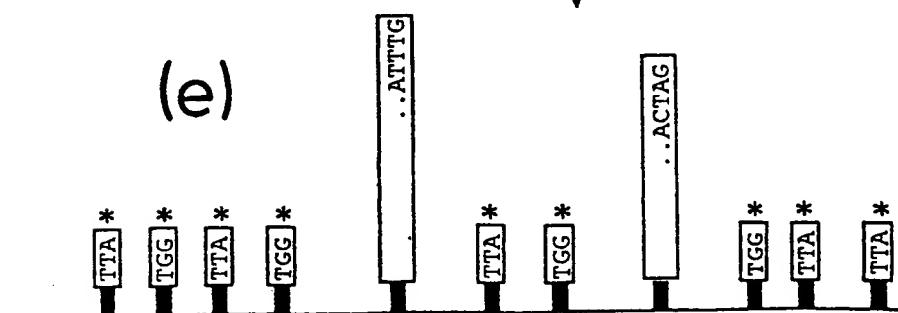
(iii)

(D)



(iii)

(e)

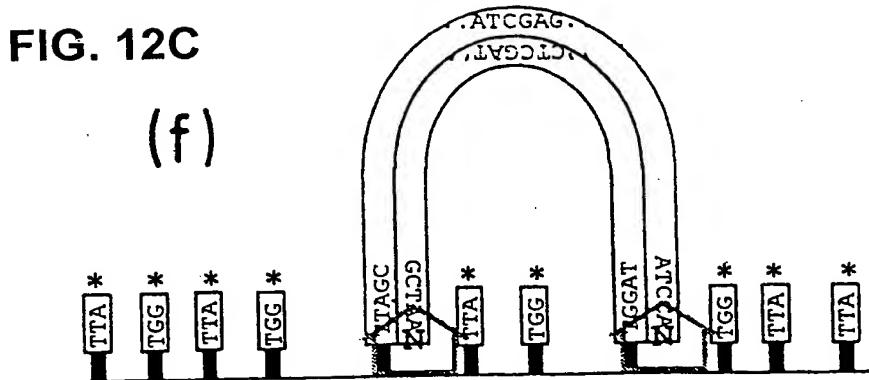




16 / 27

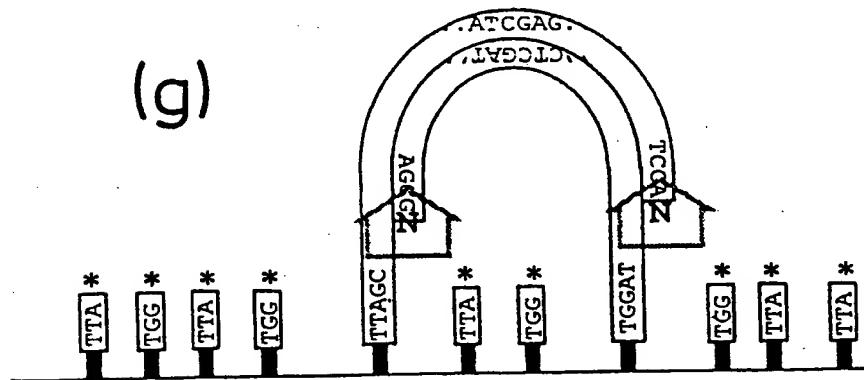
FIG. 12C

(f)



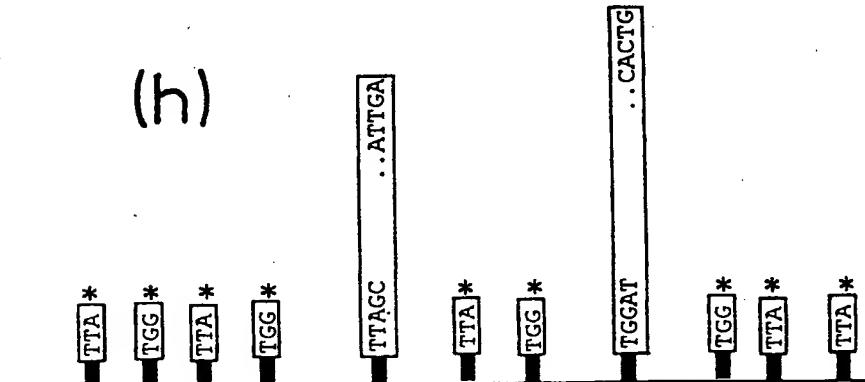
(iv) ↓

(g)



(v) ↓

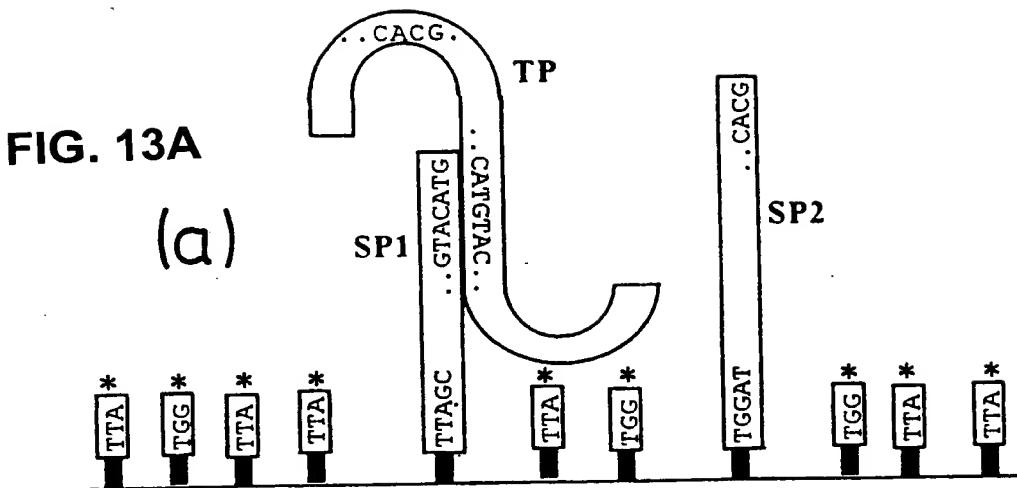
(h)



17 / 27

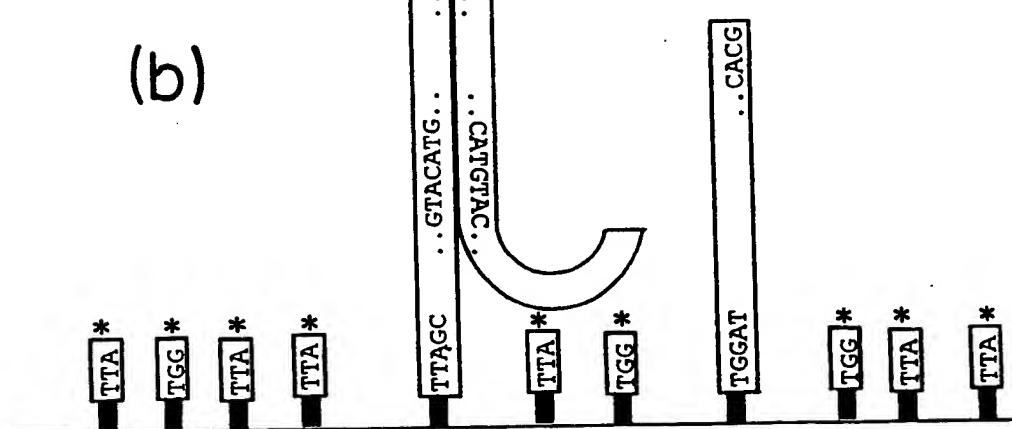
FIG. 13A

(a)



(i)

(b)

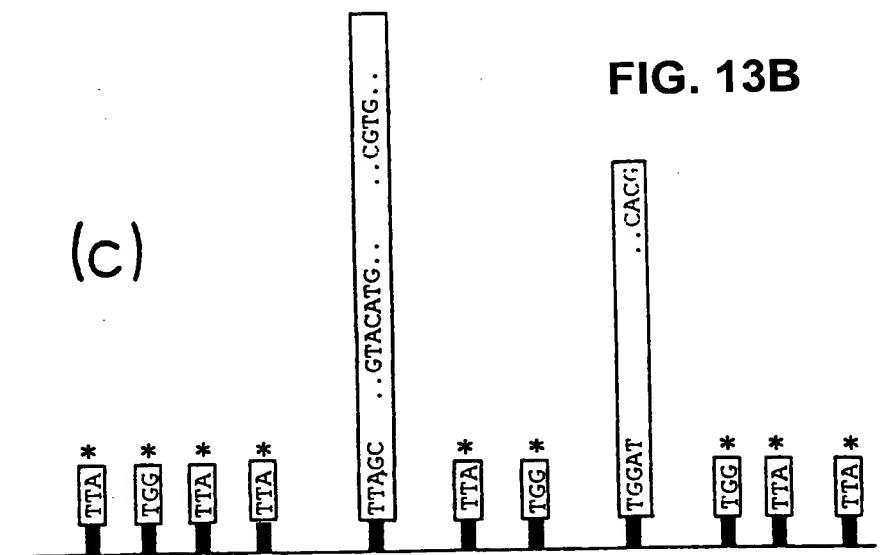


(ii)

18 / 27

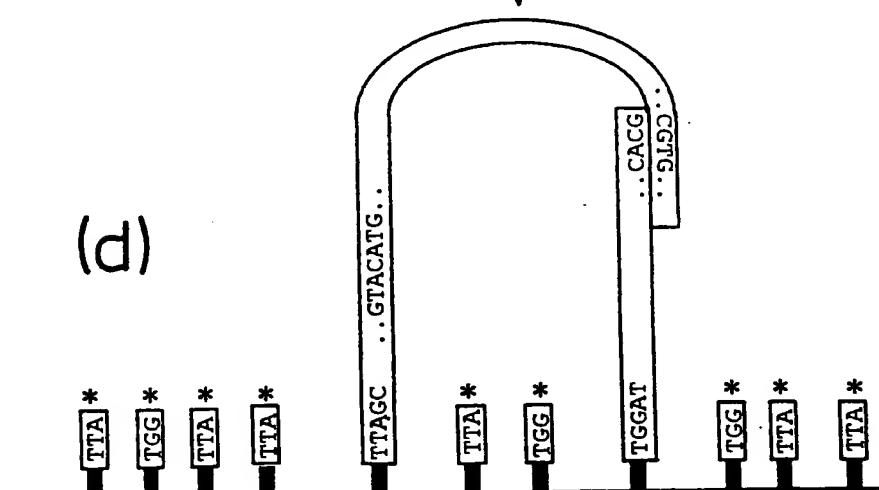
FIG. 13B

(C)



(iii)

(D)



(iv)

(e)

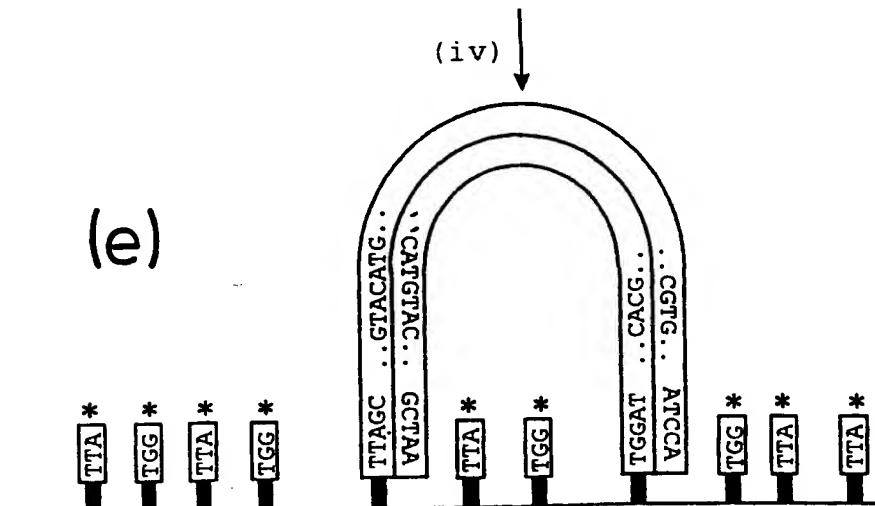
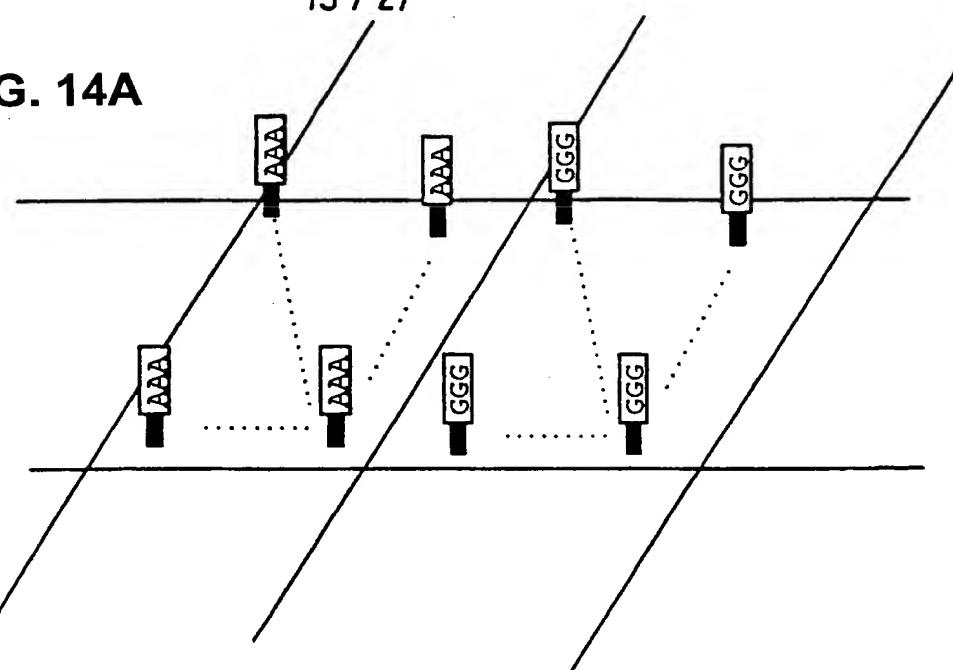


FIG. 14A

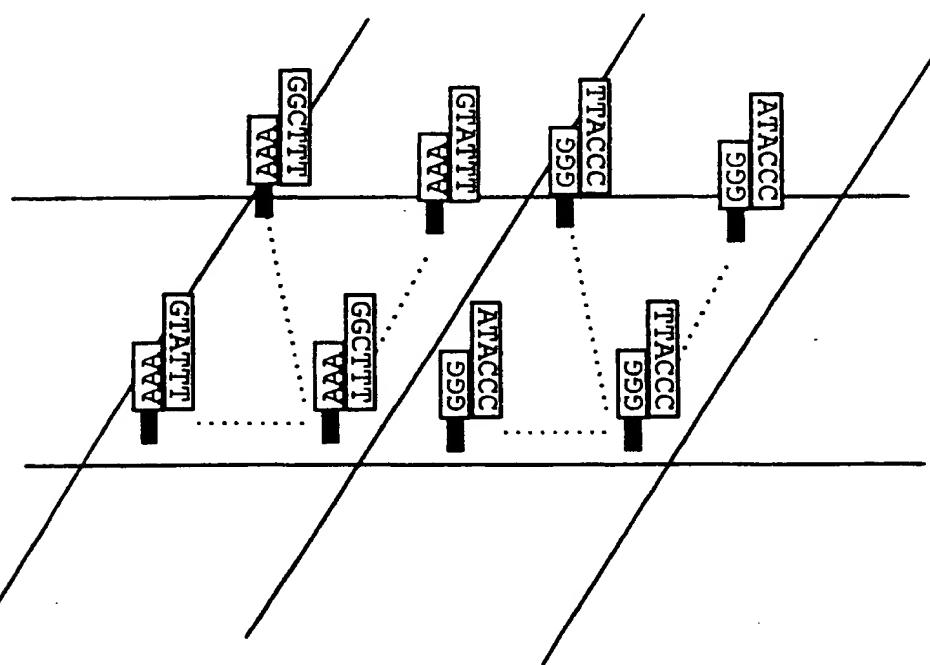
19 / 27

(a)



(i)

(b)



(ii)

20 / 27

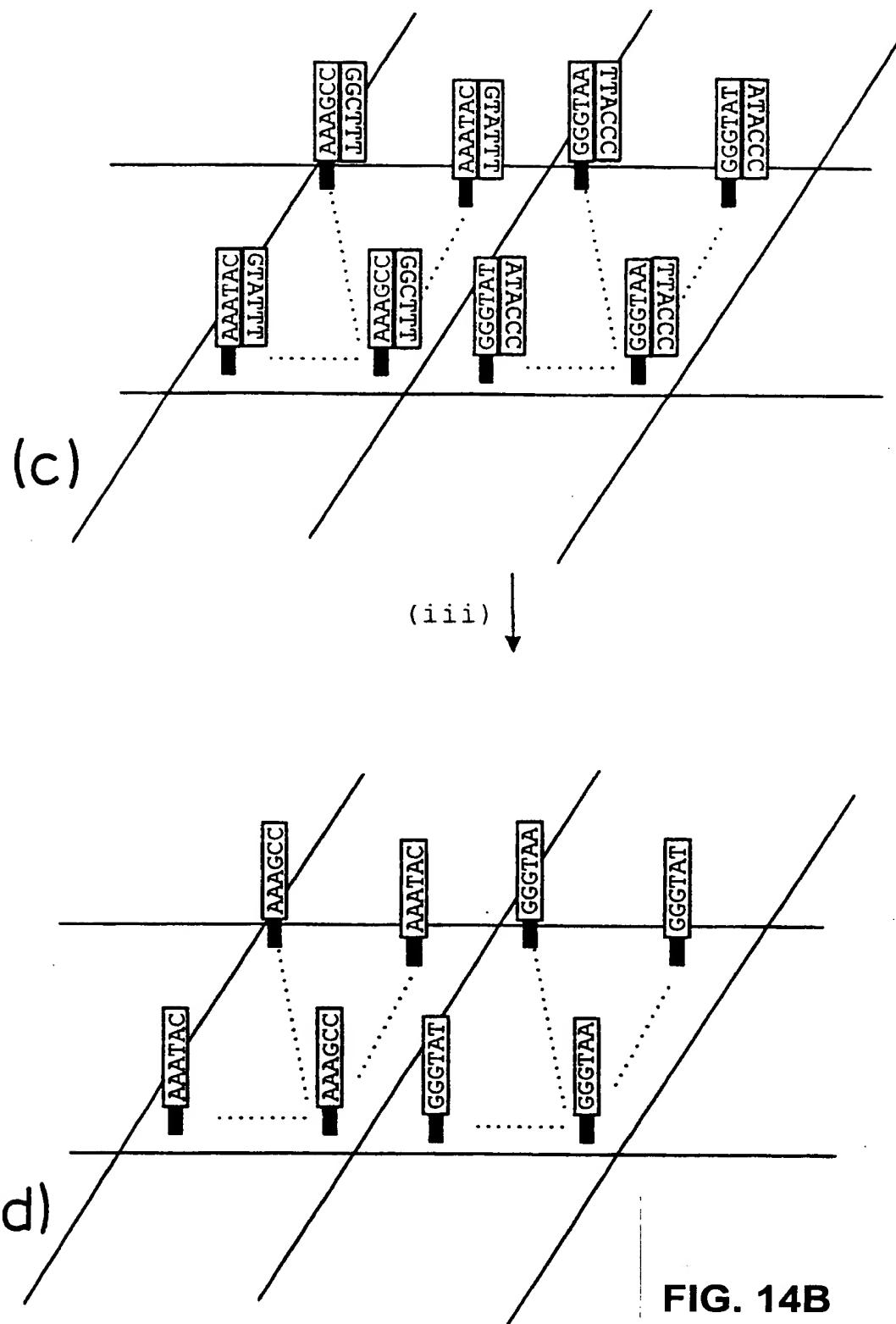


FIG. 14B

21 / 27



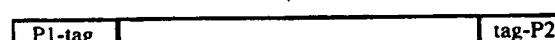
+
↓ (i)



III



+
↓ (i)



III



+
↓ (i)



III



+
↓ (i)

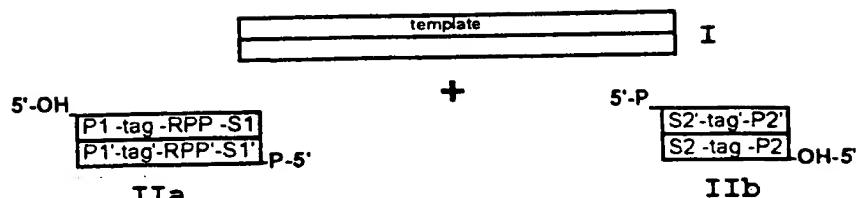


III

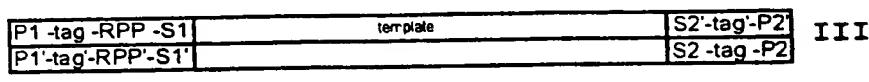
FIG. 15

22 / 27

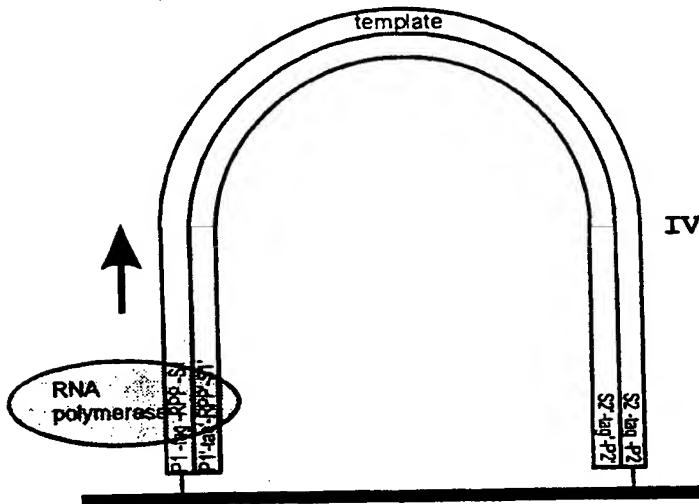
(a)



(b)



(c)



(d)

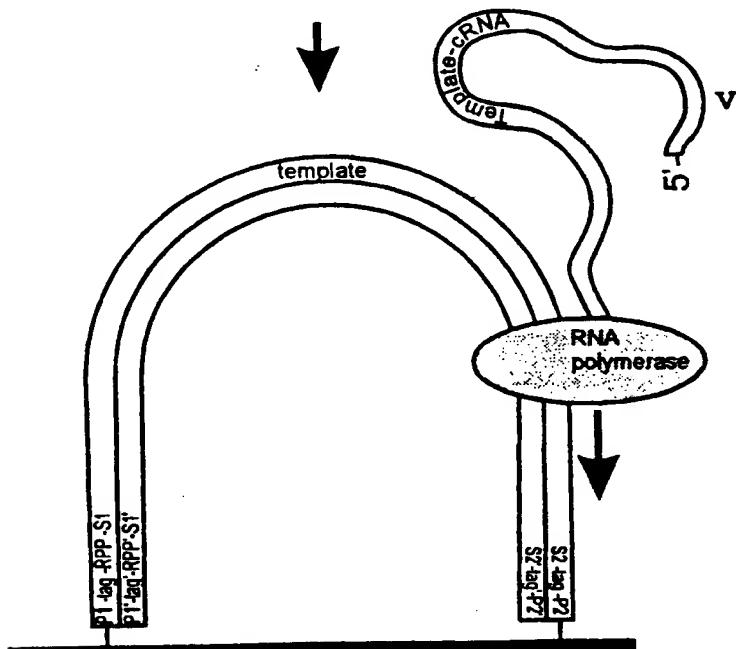
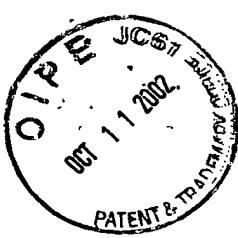


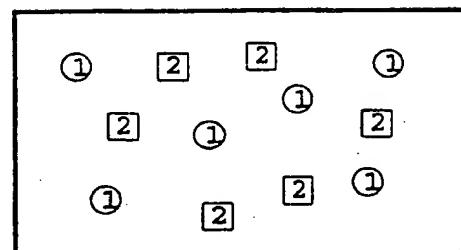
FIG. 16



23 / 27

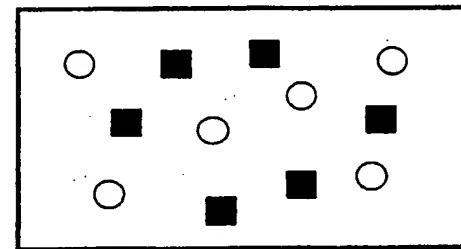
FIG. 17
in situ Sequencing

(a)



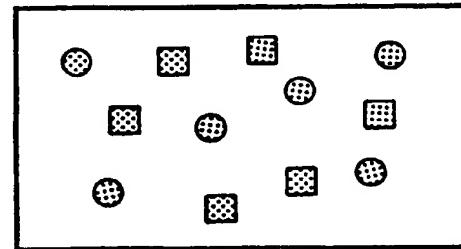
Two types of
randomly arrayed
DNA colonies

(b) step 1
add dGTP



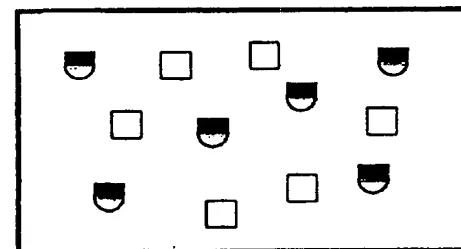
1 2
G

(c) step 2
add dATP



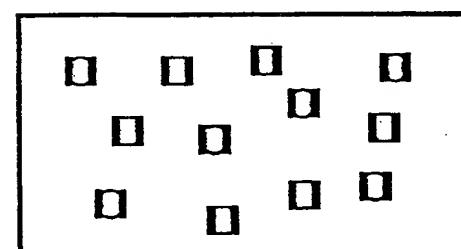
A **A**

(d) step 3
add dTTP



T

(e) step 4
add dCTP



C **C**

DNA sequence:
type 1: ATC
type 2: GAC

24 / 27

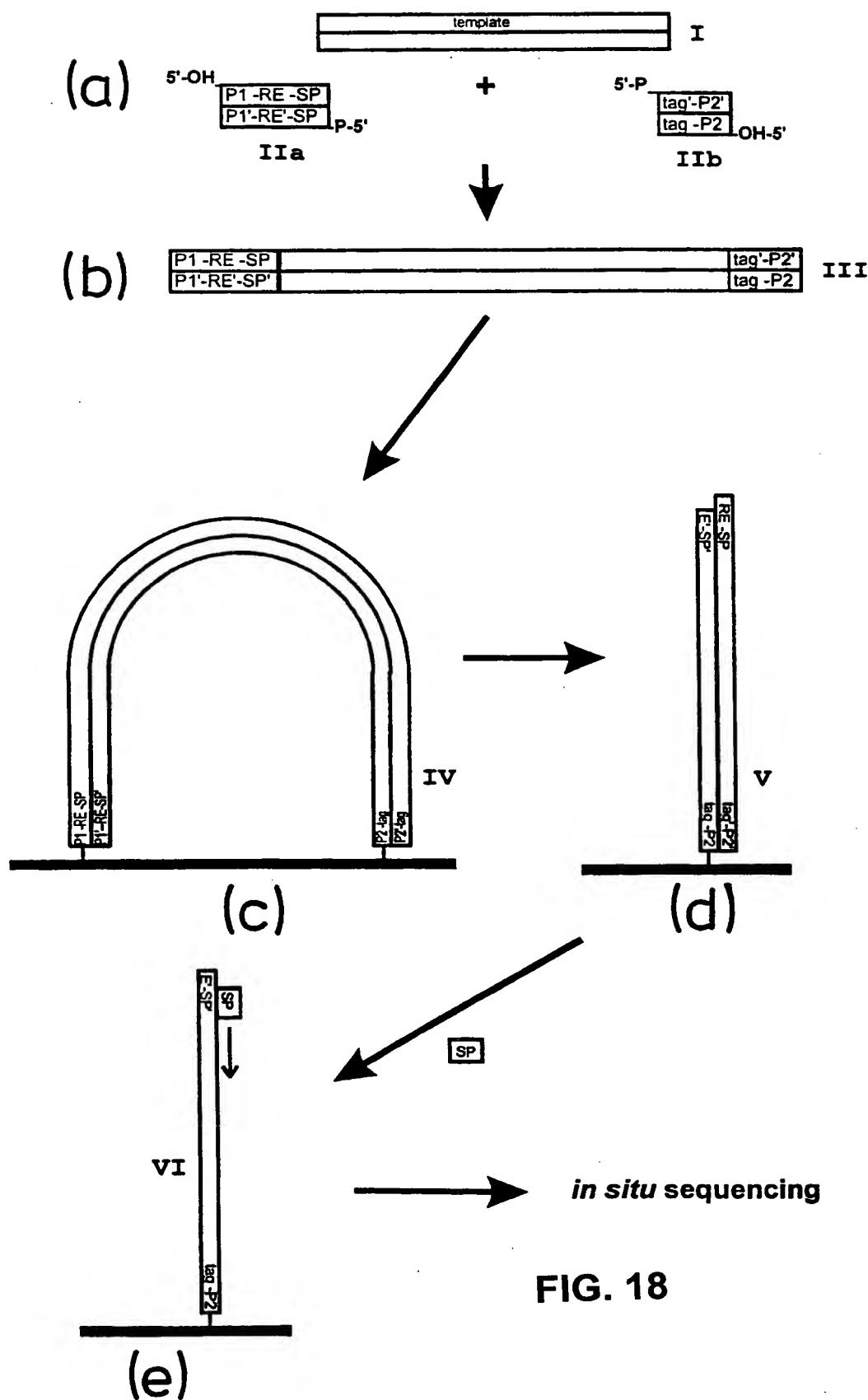
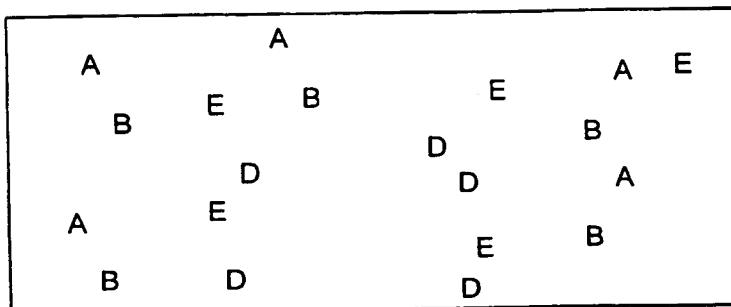


FIG. 18

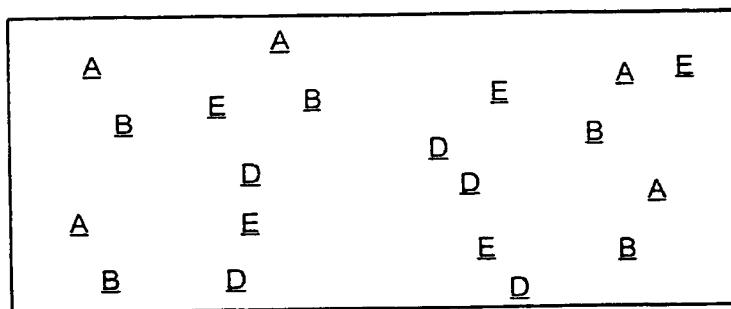
25 / 27

(a)



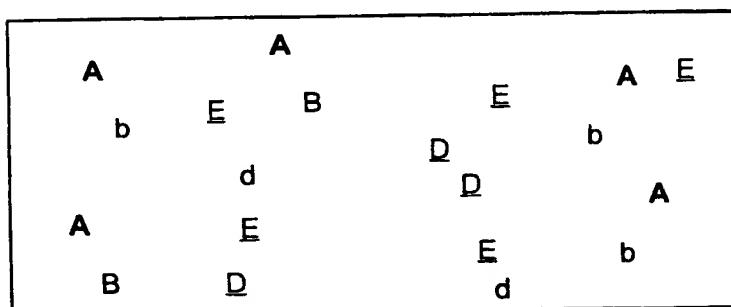
(i)

(b)



(ii)

(c)



(iii)

(d)

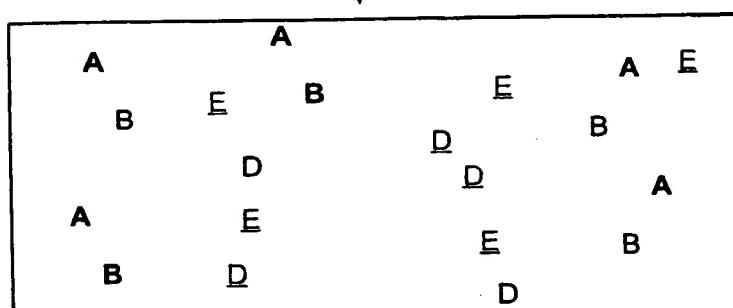
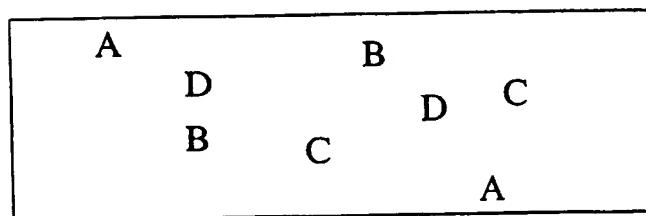


FIG. 19

SUBSTITUTE SHEET (RULE 26)

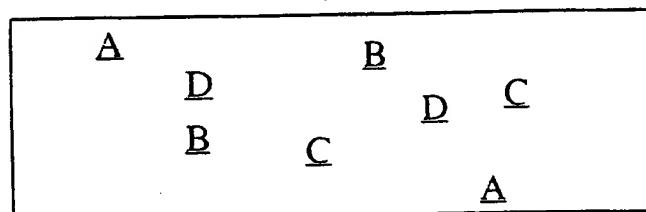
26 / 27

(a)



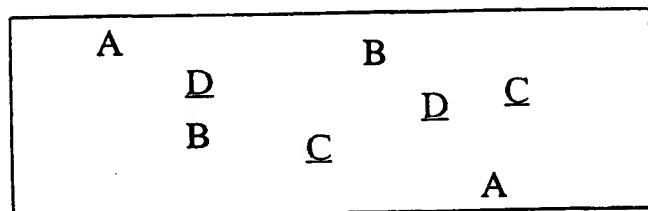
(i)

(b)



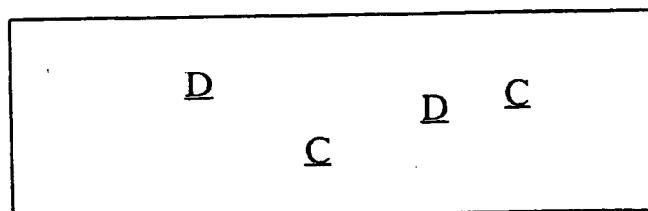
mA + mB → (ii)

(c)



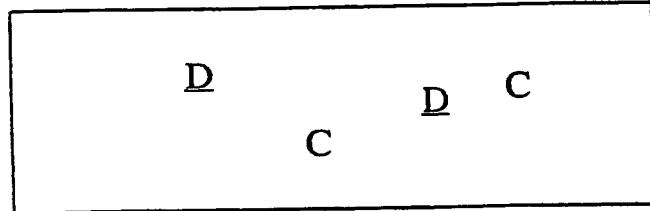
R.E. → (iii)

(d)



mA + → (iv)

(e)



P1 + → (v)

(f)



FIG. 20

27 / 27

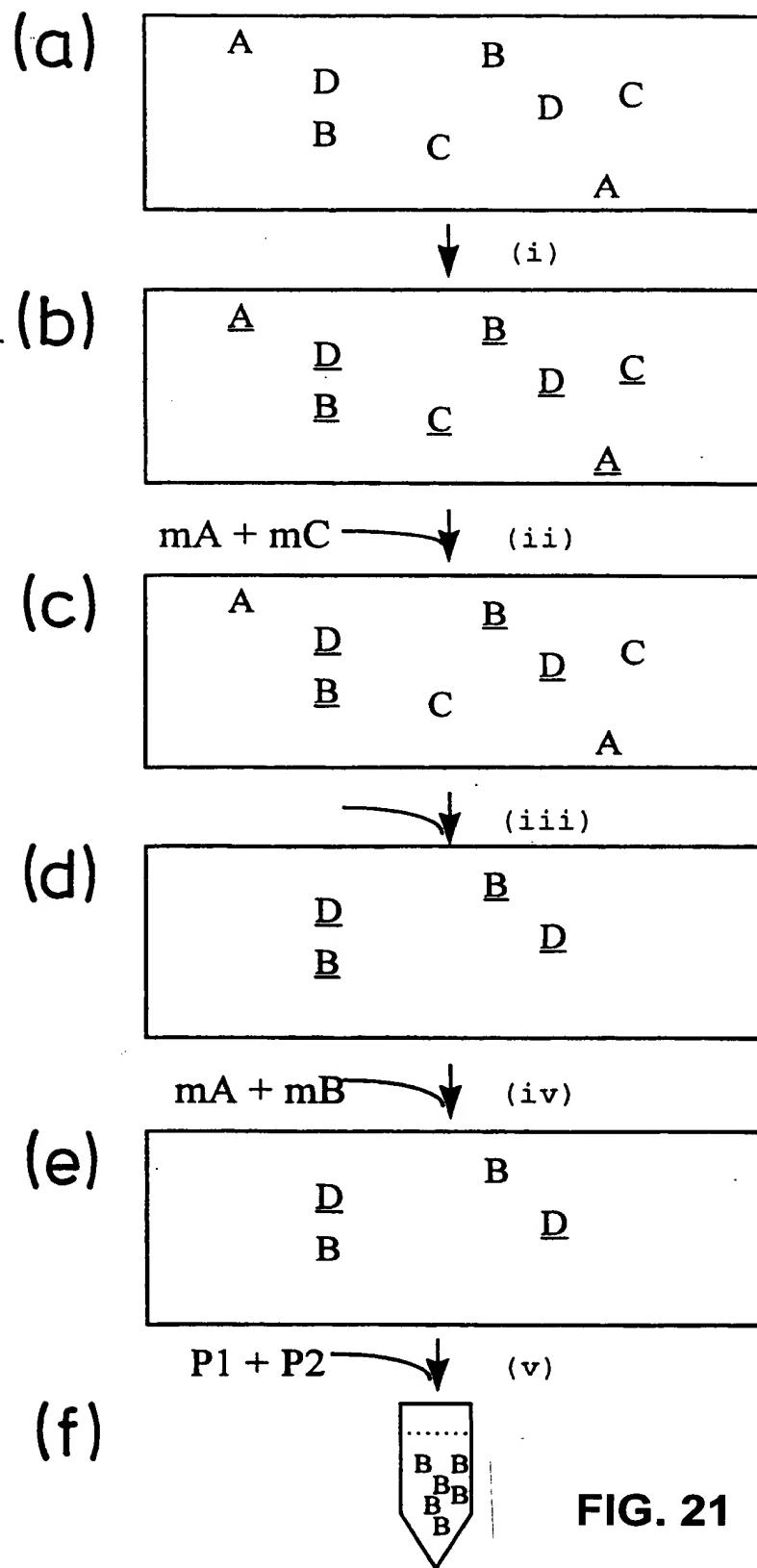


FIG. 21